

Patent Claims

Suba1

1. Solenoid valve with winding (12) surrounding a pole core (21) and held in a housing (2) and a spring-stressed flat armature (38), which in its rest position forms an axial air gap with the pole core (21) and which is fastened to a plunger (36) that passes through the pole core (21), on the end section of which that is at a distance from the flat armature a connection can be controlled between a pressure and a drain connection (P, T), characterized in that the pole core (21) is pressure-compensated on both of its faces.
2. Solenoid valve according to claim 1, characterized in that both faces of the pole core (21) are connected to a drain connection (T).
3. Solenoid valve according to claim 1 or 2, characterized by a pole disk (48) that surrounds the pole core (1) at a distance and that, with the flat armature (38) delimits a partial area of the air gap lying radially on the outside.
4. Solenoid valve according to claim 1, characterized in that the pole disk (48) is connected to the housing (2) – preferably by crimping or pressing.
5. Solenoid valve according to one of the preceding claims, characterized by a valve body (28) that is prestressed against a valve seat (34) by the plunger (36).
6. Solenoid valve according to one of the preceding claims, characterized in that the two faces of the pole core (21) are connected to each other by a compensating channel.
7. Solenoid valve according to claim 6, characterized in that the compensating channel is formed between the plunger (36) and an axial hole of pole core (21).
8. Solenoid valve according to claim 6, characterized in that the compensating channel extends along the outer circumference of the pole core (21).

9. Solenoid valve according to one of claims 5 to 8, characterized in that the valve seat (34) is formed of an insert piece (26) that is fastened in housing (2) – preferably by crimping or pressing.

10. Solenoid valve according to one of the preceding claims, characterized by a connecting hole (22) that is formed between a holding chamber (20) for the pole core (21) and a chamber (30) of the housing on the drain side, through which the plunger (36) passes with radial play.

11. Solenoid valve according to one of the preceding claims, characterized in that the armature chamber (56) is closed by a cover (42) through which coil pins (16) pass, whereby a slot between coil pin (16) and cover passage is sealed by means of a sealing ring.

12. Solenoid valve according to claim 11, characterized in that the coil pins (16) are formed as connector or pin exits.

13. Solenoid valve according to claim 11 or 17, characterized in that housing (2) is screwed connected with cover (42), flanged or cast.

add a2  
add B6  
add C1